

## REMARKS

Claims 24, 26, 29-41, 43, 45, and 47-57 are pending in the present application. Claims 29 and 52-57 are allowed. Claims 24, 29, 45 and 52 were amended in this Response. No new matter was introduced as a result of the amendment.

Applicant wishes to point out that claim 46 was not previously canceled, but was inadvertently omitted from the text of the response that was previously considered by the Examiner. Once the clerical error was discovered, the claim was included in the subsequent response. Furthermore, claim 46 depends from independent claim 45, which was properly argued in the Response. Should the Examiner maintain the objection to claim 46, he is earnestly requested to contact the undersigned to establish a speedy resolution of the matter.

Claims 24, 26, 30-36, 39, 41, 43, 45 and 47-51 were rejected under 35 U.S.C. §112, first paragraph for containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner suggested that the specification did not teach the feature of “selectively setting/adjusting wavelength”. The Applicant respectfully traverses the rejection.

In light of the previous amendments to claims 24 and 45, the claims are definitively disclosed in the specification. Specifically, page 10, line 5 recited “a pump signal PS of constant wavelength  $\lambda_{L1}$ ,” and the power level of the pump laser is further adjusted (see page 11, lines 9-10: “readjusts the power of the pump oscillator”). Accordingly, it is submitted that the rejection under 35 U.S.C. §112, paragraph 1, is overcome and should be withdrawn. The Applicant also wishes to point out that this argument was submitted in the last Response, but was not addressed in the Advisory Action. Favorable reconsideration is respectfully requested.

Claims 24-26, 30-31, 33-36, 39, 41, 43, 45 and 47-50 were rejected under 35 U.S.C. §103(a) as being anticipated by *Yamane et al.* (U.S. Patent No. 5,764,404) in view of *Inagaki et al.* (U.S. Patent 5,745,283). Claim 32 was rejected under 35 U.S.C. §103(a) as being anticipated by *Yamane et al.* (U.S. Patent No. 5,764,404) in view of *Inagaki et al.* (U.S. Patent 5,745,283) and further in view of *Onaka et al.* (U.S. Patent 6,067,187). Claim 51 was rejected under 35 U.S.C. §103(a) as being anticipated by *Yamane et al.* (U.S. Patent No. 5,764,404) in view of

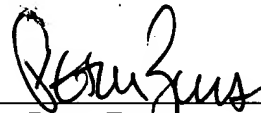
*Inagaki et al.* (U.S. Patent 5,745,283) and further in view of *Chikuma et al.* (U.S. Patent 6,055,093). The Applicants respectfully traverses these rejections for the following reasons.

Specifically, *Yamane et al.* does not teach the feature of “injecting at least one pump signal and at least one further pump signal into the optical conductor when at least two signal levels of the measured signal levels of at least one of the plurality of transmission bands are changed or absent from the transmitted broadband optical signal causing said tilting” recited in claim 24, and similarly recited in claims 45 and 52. The present claims address one of the problems associated with the tilting that occurs due to a band dropping out or changing during a transmission. In contrast, *Yamane* makes no provision for such a feature. *Yamane* teaches multiplexing the optical signals to avoid reception error, however, the pump signals do not coincide with the signal levels as described in the present claims, since the system in *Yamane* does not care if the transmission bands are changed or absent (col. 9, lines 40-48). As was argued previously, the disclosure in *Yamane* uses amplifier control, which is designed to compensate for the gain tilt caused by the amplifier itself. The pump lasers are applied in order to pump the amplifier and to cause gain. As a result, *Yamane* has a control loop (Fig. 15) to provide a constant gain for all channels of the WDM-signal. Accordingly, the amplifier control by *Yamane* controls the gain and the tilt of the amplifier medium and does not concern itself with changing or dropping of signal levels during transmission. In contrast, the present claims are recited so that the pump lasers are used to regulate the power levels of the WDM-channels instead of amplifier control. Depending on the selected wavelength or power level of the pump lasers, either an amplification or an attenuation of the WDM-signal spectrum results.

Additionally, the other cited prior art does not cure the deficiencies of *Yamane et al.* and *Inagaki* discussed above. In light of the foregoing comments, the Applicant respectfully submits that claims 24 and 45, and all claims that are dependent therefrom, are allowable over the prior art of record and requests that the rejection be withdrawn, accordingly. The Applicant respectfully submits that the application is in condition for allowance and requests a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY  \_\_\_\_\_  
Peter Zura

Reg. No. 48,196

P.O. Box 1135

Chicago, Illinois 60690-1135

Phone: (312) 807-4208

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